THE MINISTER OF FINANCE (SHRI P. CHIDAMBARAM): (a) and (b) Yes, Sir.

(c) and (d) World Bank has proposed to upscale its assistance to India. IMF does not lend for development activities, *per se*, but only for structural adjustment purposes for countries facing external imbalances. India has not availed of any assistance from IMF since 1993.

Commercial production of bio-diesel

*112. SHRI R.P. GOENKA: Will the Minister of PETROLEUM AND NATURAL GAS be pleased to state:

(a) whether any detailed studies have been undertaken to explore the possibility of commercial production of bio-diesel, derived from certain plants like 'Jatropha', 'Pungam' etc. which can be grown even in wastelands, for use as alternative fuel to petro-diesel like LNG, CNG etc.;

(b) if so, the details thereof;

(c) whether it is a fact that a number of other countries like Canada, the US and some European countries have already undertaken major bio-diesel programmes to identify and develop high yielding varieties of plants and also for its use in transport vehicles etc.; and

(d) if so, the details thereof?

THE MINISTER OF PETROLEUM AND NATURAL GAS (SHRI MANI SHANKAR AIYAR): (a) to (d) Bio-diesel, a diesel fuel substitute, is made from vegetable oils (both edible & non-edible) and animal fats. Studies have been undertaken to explore the possibiity of production of bio-diesel from non-edible oils like *Jatropha curcas and Pongomia*. The Ministry of Rural Development has been made the nodal Ministry to implement the National mission on Bio-diesel, and that Ministry has informed that a detailed project report is being prepared by The Energy Research Institute (TARI) for the purpose.

At present, field trials are being conducted by oil marketing companies to use bio-diesel and diesel blend on buses in collaboration with Haryana Roadways and with Brihanmumbai Electric Supply and Transport Undertaking (BEST), Mumbai. Field trials and engine tests on locomotives are also in progress. If the field trials establish the efficacy

of bio-diesel and diesel blend, and indicate the possibility of economic pricing of these products, then large scale oil seeds plantation would have to be undertaken before commercial production of bio-diesel begins.

The Government is aware that the European Union (EU), United States of America (USA), Canada and some other countries have undertaken bio-diesel programmes, with a variety of feed-stocks being used. However, the feed-stocks for production of bio-diesel in EU and USA are vegetable oils which are mainly edible oils. In USA, the bio-diesel programme is based on soyabean oil while in EU and most of Europe, sunflower oil and rapeseed oil are the major feed-stocks. Bio-diesel is being blended at 5 to 20% levels in USA, Canada and the EU, and is being used commercially. India is short of edible oil, hence non-edible oils like *Jatropha curcas and Pongomia* are proposed for bio-diesel production.

Air strips in Himachal Pradesh

†*113. SHRI SURESH BHARDWAJ: Will the Minister of CIVIL AVIATION be pleased to state:

(a) the number of air strips in Himachal Pradesh and the number of those being used for regular flights;

(b) whether the State Government has demanded the help of the Central Government to expand and upgrade these air strips; and

(c) if so, the details of the assistance to be provided by the Central Government?

THE MINISTER OF STATE OF THE MINISTRY OF CIVILAVIATION (SHRI PRAFUL PATEL): (a) There are three airstrips in Himachal Pradesh and all these airstrips are being used for regular flights.

(b) and (c) Yes, Sir. Under a Memorandum of Understanding signed between Airpors Authority of India (AAI) and the State Government of Himachal Pradesh, AAI is required to execute the identified development works at Kangra and Kullu airports as deposit work for the State Government. AAI has completed development works at Kangra. AAI has further taken up resurfacing of runway, construction of technical block-cum-control tower and fire station works at Kangra Airport from its own

† Original notice of the question was received in Hindi.